



**Advanced Test Equipment Rentals**  
**www.atecorp.com 800-404-ATEC (2832)**

**MEG-CHEK®**

**Model 2955A, 2956A, 2957A**

**MEGOHMMETERS**

**Variable High Voltage to 10kVDC**



## GENERAL FEATURES

Three models covering the ranges of 0-2.5, 5 and 10kVDC test range continuously variable.

Three models covering the ranges of 0.1 to 50,000, 100,000, and 200,000 megohms.

For routine insulation resistance and dielectric absorption testing.

Ideal for step-voltage insulation testing techniques.

Portable--only 25 lbs.

MEG-CHEK® variable voltage megohmmeters are designed specifically for insulation tests on cables, bushings, motors and other large high voltage equipment.

In such testing, significant effects can be observed that are dependent upon the value of the test voltages. These effects are not revealed by a single voltage megohm test, and potential equipment failures may not be revealed if only a single low voltage insulation resistance test is made. To fully analyze the insulation condition of such large equipment, it is most revealing to run tests at two or more test voltages--500 VDC, 1500 VDC and/or 2500 VDC are commonly selected. We also have models that test to 5,000 and 10,000 volts DC for testing high voltage rated equipment.

Higher voltage tests generally show lower values of insulation resistance for a given piece of equipment. Additionally, dielectric absorption curves that show a continuous rise in insulation resistance with time of test indicate that the insulation is reasonably free from moisture, surface leakage and deterioration. The different curves for different test voltages coincide, or at least are closely grouped, if the insulation is in satisfactory condition.

**ASSOCIATED  
RESEARCH, INC.®**

# MEG-CHEK®

## Model 2955A, 2956A, 2957A

### Specifications

Input: 115VAC, 50/60Hz., 1 Amp. Models 2955A, 2956A and 2957A.  
230V, 50/60 Hz, 0.5 Amp. Models 2955AA, 2956AA and 2957AA.  
Both have a 5-ft., 3-conductor line cord with three prong plug.

**Model 2955A:** 0-2.5kVDC, 50,000 megohms

**Test Voltage:** Continuously adjustable from zero to 2500 VDC. Scale calibrated in 250-volt steps.

**Megohm Ranges:** (At 250-volt increments): .1 to 5,000/ .2 to 10,000/ .3 to 15,000/ .4 to 20,000/ .5 to 25,000/ .6 to 30,000/ .7 to 35,000/ .8 to 40,000/ .9 to 45,000/ 1.0 to 50,000.

**Model 2956A:** 0-5 kVDC, 100,000 megohms

**Test Voltage:** Continuously adjustable 0 to 5 KV DC. Scale calibrated in 500-volt steps.

**Megohm Ranges:** (At 500-volt increments): 0.2 to 10,000/ 0.4 to 20,000/ 0.6 to 30,000/ 0.8 to 40,000/ 1.0 to 50,000/ 1.2 to 60,000/ 1.4 to 70,000/ 1.6 to 80,000/ 1.8 to 90,000/ 2.0 to 100,000.

**Model 2957A:** 0-10 kVDC, 200,000 megohms

**Test Voltage:** Continuously adjustable 0 to 10 KV DC. Scale calibrated in 1000-volt steps.

**Megohm Ranges:** (At 1000-volt increments): 0.5 to 20,000/ 1.0 to 40,000/ 1.5 to 60,000/ 2.0 to 80,000/ 2.5 to 100,000/ 3.0 to 120,000/ 3.5 to 140,000/ 4.0 to 160,000/ 4.5 to 180,000/ 5.0 to 200,000.

**Voltmeter:** Connected across output leads indicating true test voltage regardless of regulation and load. Accuracy 2% of full scale.

**Megohmmeter:** Employs four range, non-drift electronic amplifier, eliminating scale recalibration prior to tests. Accuracy 2% of full scale in terms of leakage current.

**Guard Terminal & Selective Guard Switch:** For bypassing unwanted leakage currents around the megohmmeter to read true insulation resistance of circuit under test.

**Electronic Circuits:** Protect both voltmeter and megohmmeter from damage due to overload or direct short across output even on high voltage or high megohm ranges.

**Selenium Rectifier Power Supply:** Provides up to 15 milliamperes output current for rapid charging of capacitive loads.

**Controls:** Input power "On-Off" switch and pilot light, stepless test voltage adjustment, high voltage: "On-Off" switch and pilot light, megohmmeter range selector switch, guard terminal and ground selector switch.

**Safety Features:** High reactance, high voltage transformer collapses when output is short circuited, limiting maximum output current to approximately 15 milliamperes.

**Construction:** Case and removable cover are welded steel baked grey hammertone finish with convenient carrying handle. Front panel is blue hammertone finish. Cover compartment for storing permanently attached line cord and high voltage test cable, two metering leads, instruction manual, records.

**Size:** (Including cover): 13 1/2" W x 13 1/2" H x 8 1/16"D (34cm x 34cm x 20.5cm)

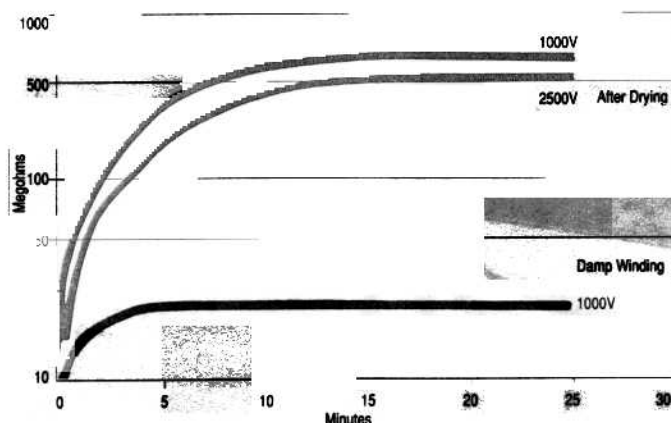
**Weight:** (Including cover): 25 lbs. (11.4 kg.)

*Specifications subject to change without notice.*

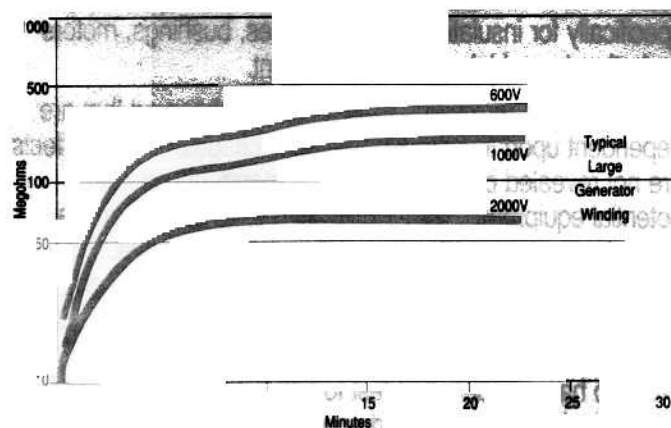
Figures 1 and 2 furnish further information on the ease with which these tests can be made, plotted, and analyzed. The step method of insulation resistance testing will also provide information for determination of the polarization index. This index is the ratio of insulation resistance at the end of ten minutes to the insulation resistance at the end of one minute. It is generally agreed that if this value is less than two it is an indication of excessive moisture or contamination. Values of ten or more may be expected when testing large equipment in good condition.

All of these tests are performed with more emphasis on the relative order of magnitude of the changes in values as the test progresses, rather than in absolute readings.

The results obtained with ASSOCIATED RESEARCH MEG-CHEK Megohmmeters are accurate and meaningful additions to equipment evaluation programs.



**Figure 1:** Insulation resistance vs Time plot for the stator winding of a large generator. Lower curve shows initial test of a winding when damp. Top curves illustrate tests after drying. Close curve grouping indicates good insulation.



**Figure 2:** Three tests at increasing voltages on a large generator winding. Analysis reveals the continued rise in resistance value (dielectric absorption) and relatively close grouping of curves of good windings.

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**Keeping Power in Service  
...Since 1936**

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